EXHIBIT 22

IN THE UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF SOUTH DAKOTA

TERRI BRUCE,)
Plaintiff,)
vs.) No. 17-5080
STATE OF SOUTH DAKOTA and)
LAURIE GILL, in her official)
capacity as Commissioner of)
of the South Dakota Bureau)
of Human Resources,)
Defendants.)

DEPOSITION OF DR. PAUL W. HRUZ, M.D., Ph.D.
TAKEN ON BEHALF OF THE PLAINTIFF
JULY 16, 2018

(Starting time of the deposition: 8:49 a.m.)

INDEX

EXHIBITS

(Original exhibits retained by the court reporter to be copied and attached to the transcript.)

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Deposition of DR. PAUL W. HRUZ, M.D., Ph.D., produced, sworn and examined on the 16th Day of July, 2018 between the hours of 9:00 a.m. and 5:00 p.m. at the offices of Alaris Litigation Services, 711 N. 11th Street, in the City of St. Louis, State of Missouri, before Rebecca Brewer, Registered Professional Reporter, Certified Realtime Reporter, Missouri Certified Shorthand Reporter, and Notary Public within and for the State of Missouri.

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A Definitely, yes.
Q Okay. And these are patients who you were treating for other purposes; diabetes or other conditions that came to your --
A That is correct.
Q I see. And so, when you've had a patient for whom you were treating for diabetes, or some other condition, indicate a desire to transition gender, indicating gender dysphoria, what do you do?
A I have not had a patient that has come to me specifically in the care for, for example, diabetes, that asks me to be involved in that aspect of their care.
Q So, you just -- can you say a little bit about how you come to learn that they have a desire to transition gender?
A I would say that I don't have absolute confidence that they have that problem. The only expertise or the only knowledge I have is when they subsequently are referred to the other component of our practice that addresses that issue.
Q Okay. Who refers them to that other part of your practice that addresses that issue?
A Most often they self refer to that.
Q Have you referred any of the patients to

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the Transgender Center at Wash U?
A I have not been asked to do so.
Q So you have not?
A That is correct.
Q Have you -- so while you've come into contact with a small number of patients with gender dysphoria, you have not treated the gender dysphoria, is that correct?
A That is correct.
Q Okay. And do I understand you intentionally choose not to treat that condition?
A That is correct.
Q That's because you -- well, why don't you tell me. Why do you intentionally choose not to treat that condition?
A Well, so, when I first was exposed to the question about the program that is going on now, the treatment of gender dysphoria, I was actually the chief of our division of endocrinology and I was charged with the task of actually looking at the scientific evidence supporting the guidelines that are being put forward and, as a physician scientist, I did that in a rigorous manner and I concluded that there was not enough evidence to support the treatment that was being put forward, so, in my

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opinion, as far as best medical practices, it wasn't in the best service of the patients that were coming for treatment.
Q But that was a particular form of treatment, right, that you felt was not the best practice, right?
A I'm a pediatric endocrinologist and what a pediatric endocrinologist is charged with doing is giving hormones to patients.
Q That was the type of treatment that you felt was not appropriate practice?
A That was the type of the treatment that I did not find sound scientific evidence supporting the beneficial outcomes for those patients, correct.
Q Okay. So, I take it, given your field, you have not had occasion to diagnose anyone with gender dysphoria, is that right?
A I have not been charged with that task, no.
Q So, you've never diagnosed anyone?
A I have not intentionally diagnosed, correct.
Q Intentionally? Or, I mean, unintentionally?
A I've not gone through the DSM criteria

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with a checklist, which is done in the clinics, to check off whether they fulfill the criteria that's in the DSM-5, no.
Q Okay. I just want to make sure I'm not missing something. Did you, in some informal way, diagnose people with gender dysphoria?
A Again, in the context of not having a doctor/patient relationship where I've been charged with caring for that, I have interacted with numbers of individuals that have -- one of the things that I did very early on, when I was investigating this, was to become familiar with the problem and that involved being able to meet with parents and individuals that had this particular condition. And if I were to have gone through the DSM Manual and listened to the stories that they were telling, they would have certainly fulfilled that criteria, but, again, it was not in a doctor/patient relationship, it was merely in the context of trying to understand what is going on with these children.
Q I see. So you've met people that you believe probably meet the criteria but you haven't diagnosed any, is that a fair way to put it?
A Correct. Again, it's the context of when -- the interactions. And I'm certainly very

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clarify what you mean by formal education.
Q Well, I'll ask broadly; any kind of training of any sort that a doctor would get in the course of, you know, either their initial medical education or continuing education.
A So, working at a major academic institution, we're actually charged with providing medical education and so, to the extent that we've held journal clubs that we've had presentations with my colleagues where we've discussed the scientific evidence, where we've gone formally through the DSM Guidelines, where we've gone through the Endocrine Society Guidelines, that has been done at my institution. Have I sought out and gone to a separate conference related to gender dysphoria? The answer is no.
Q But, at your own institution, you've participated in these interactions, these journal clubs and other activities that address gender dysphoria and the treatment for gender dysphoria?
A That is a standard -- that is one of the components of what we do for all the conditions that endocrinologists are engaged in.
Q Okay. Have you conducted any research related to gender dysphoria or the treatment of

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gender dysphoria?
A No formal trials, no.
Q Any other research?
A I've been in the area of HIV research for 20 years and conducted a number of scientific studies that -- but not directly related to gender dysphoria.
Q Yeah, I'm sorry if I was unclear. I didn't -- I know you've done research, but in the area of gender dysphoria, no research, is that right?
A I have not done any -- I'm not a clinical trials physician scientist. I'm a bench scientist.
Q What does that mean?
A I conduct laboratory research, so I'm engaged in hypothesis-driven research.
Q Okay. So, talking about research broadly, you haven't conducted any form of research relating to gender dysphoria, is that right?
A No, I have. I would consider research in looking at the extensive literature that's there is research. It's not a randomized controlled trial, it's not a formal study, but that would fit within the domain of research.
Q You mean reviewing research that was

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published by other people? Is that what you mean?
A So, again, we can define research in many different ways. If you're asking the question about research, about gathering information, about the evidence that's available, I've done a considerable amount of research and that has consisted of looking at what published data is available supporting the recommendations that are being made. That I would consider research, but it is not a clinical trial.
Q Okay. And what people might call studies, scientific studies, have you done any scientific studies?
A Again, how you define studies, again, I have not done clinical trials.
Q Okay. When you were deposed in the Adams case, November, I believe it was, last year, you mentioned you were in the process of responding to a research funding announcement by the NIH to do research related to gender dysphoria or gender identity issues. Did I get that right?
A Yes.
Q Can you tell me the status of that?
A Yes. There are a number of logistical issues that are needing to be worked out. There is no funding for that particular study going on,

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recruiting the people that are going to be necessary to conduct that study, again, I'm a pediatric endocrinologist. And to my knowledge, you know, that hasn't moved much beyond the initial planning stages. The proposal itself was a suggestion to address the question of -- a very particular question of the effects of pubertal blockade on the trajectory as far as the number of individuals that went on to cross hormone therapy and those that did not.
Q So, did you ever submit a proposal to NIH to do this research?
A No.
Q Okay. Did you ever respond to the funding announcement in any way?
A Depends on how you say "respond." I've already said I did not submit a proposal. I have taken that to colleagues. In fact, I've had very recent discussions with my colleague at Washington University that is interested in starting some sort of research effort. And I could speak at length of what I've recommended to him as far as how these studies should be conducted. I've been very disappointed that the rigor -- scientific rigor that's necessary for those studies is not currently

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discussions and I provided another layer and, again, that was one suggestion. I had a long list of things that could have been done. Many things that need to be looked at very carefully. In the process of putting these trials together, there's a lot of back and forth of being able to look at what is the right way to do the study. And that includes, you know, what is necessary to get a valid scientific conclusion, but also keeping in mind areas of research ethics and, again, even putting this forward for the Institutional Review Board that's going to be able to -- which any study that would be proposed would be fall under that auspice.

Q You mentioned a few minutes ago that there's a hypothesis that pubertal blockade can drive or lead to -- you say persistence in cross-gender identity. Did I understand that correctly?

A The full argument, or at least the concern that I have, based on the evidence that is out there, is present in one of my publications where I laid out what the evidence was there and some of the questions that were there about what is put forward as that we've established, you know, the necessity for using pubertal blockade is not substantiated by

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the scientific evidence that's there. And that it leads to a number of different hypotheses that can be rigorously tested in a scientific manner.

Q So the hypothesis that treatment with pubertal blockade can lead to persistence, that's still just a hypothesis? That's not been proven yet?

A I think the opposite has not been proven; that it's definitively shown that this is successful in sorting out those individuals that would like to go forward with cross hormone therapy or not. The evidence that's available that's been published in the literature raises the hypothesis that I'm talking about is based upon the study that showed that 100 percent of the individuals that started on pubertal blockade went on to get cross-sex hormone therapy. Now, what is put forward in a non-scientific matter as being fact, which is only a hypothesis, was that that study group was very well designed, in fact, to be able to delineate which of those that were going to persist or not. And that is actually at odds with the data that suggested there is no biological test to be able to predict which individuals will go forward or not. And, therefore, knowing the natural history of rates of

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realignment of gender identity with sex that occurs when people do not get pubertal blockade, to the results of that particular -- again, it was a very small study -- would lead to that being asked as a hypothesis as to whether that intervention itself might have been influencing the outcome.

Q So, just to make sure I'm clear, it is still just a hypothesis that pubertal blockade could lead to persistence? That's not been proven?

A That is correct. And the opposite has not been proven as well.

Q I understand. Okay. Let's take your report from this case. Actually, before we turn to that, I forgot to ask one other question. Do you have experience conducting clinical trials on any topic?

A I've only been involved in one clinical trial. It's a very small study and my role was very minor.

Q And what was that topic?

A It was on the influence of insulin sensitivity on cardiac function.

Q I see. So clinical trials isn't your area of expertise?

A That is correct.

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(Deposition Exhibit 1 marked.)

Q So I've shown you what has been marked as Exhibit 1. Is this your expert declaration from the Bruce v. South Dakota case?

A It certainly looks like it.

Q Okay. Hold on. And it includes your CV that's attached -- I think, unfortunately --

MR. JOHNSON: I've marked it. I can't give it back to you.

MS. COOPER: I don't know how that happened. Let me just check. It may be something that doesn't really matter. But let's look.

MR. JOHNSON: You want to make a clean copy?

MS. COOPER: I would like to. Can we take a break? I have a bunch of questions about this. Can we take a break off the record? Thank you so much.

(Break Taken.)

Q (By Ms. Cooper) Okay. Thanks. Dr. Hruz, I'm showing you what's been marked as Exhibit 1 -- or remarked as Exhibit 1. This is your expert declaration in the Bruce case?

A I assume so.

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Q Take a look.
A Okay. It looks like what I put together, yes.
Q Okay. Now, if we turn to your CV, which is attached.
A It's not attached to this.
Q Okay. Sorry.
MR. JOHNSON: I can help you on that, too.
MS. COOPER: Let's go off.
(Discussion off the record.)
Q (By Ms. Cooper) All right. Let's try this one last time. If you could turn to the CV attached to your report. Got that? And I see there are various publications listed.
MR. JOHNSON: Leslie, I hate to interrupt you, maybe I have an incomplete copy, or maybe it's double-sided. Hold on.
MS. COOPER: Is it missing --
MR. JOHNSON: I think we're all right.
MS. COOPER: Oh, okay. We're okay.
Q (By Ms. Cooper) Does yours look okay, Dr. Hruz?
A I'm looking through all of it.
MR. JOHNSON: Okay. I apologize. It's all there. Thank you.

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Q (By Ms. Cooper) So, Doctor, my first question for you, when you get to the publications section towards the end of your CV, you have a category called publications and then, a few pages later, a category called invited publications. Can you tell me, what's the difference between those two categories to you?
A Generally, I segregate out review articles and those types of things from the general publications that I have, which I've listed there. So these are a separate category that were required. It's a standard format that we have for our university as far as designating review articles versus clinical trials.
Q So, the invited publications are the review articles?
A That's correct.
Q And the other --
A And it includes things where, for example, most of this is -- the first 50 publications are things that I submitted directly to the journals for publication. The ones in invited publications are when either it's a review article that I submit to a journal or somebody asks me to contribute, for example, I've got the commentary in there, that was

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somebody that called me up and said, Could you comment on this clinical domain here? And it varies. But I think it's just a way that we try to distinguish from those.
Q Okay. It doesn't have to do with peer review, does it; the distinction between the two categories?
A Every paper here is always peer reviewed. The extent of the peer reviews varies. Some of them are peer reviewed by a number of investigators in the field. They're sent out for comments. Some are done at the editorial level. Depends on the nature of the publication. All of them, actually, go through for accuracy and content there to make sure that it's -- can be substantiated, everything that I've said there, so there's a level of review that goes on to every single publication.
Q Okay. And have you published any peer-reviewed scientific articles on gender dysphoria or transgender-related issues?
A There's only two papers on this CV here that relate to the area of gender dysphoria. One is No. 11. And No. 13 on the invited publication list.
Q And just for the record, the No. 11 is the article called Growing Pains, Problems with Pubertal

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Suppression in Treating Gender Dysphoria, published by The New Atlantis. And No. 13 is The Use of cross-sex Steroids in Treating Gender Dysphoria, published by The National Catholic Bioethics Quarterly, is that correct?
A That is correct.
Q Thank you. And these are -- actually, before I move on to talk about those, have you submitted any articles on transgender issues or gender dysphoria for publication that weren't accepted by any journals?
A No, I've never had one that was not accepted. I'm in the process of writing a paper, as we speak, on the issues of experimentation and the parameters that are necessary for conducting trials in this domain.
Q Okay. You're in the process of writing it, you said?
A That's correct.
Q So you haven't submitted it to anybody?
A That's correct. It's due within the next several months. I'm probably going to be late in getting it, but --
Q Was that an invited paper?
A Yes.

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Q Who invited you?
A The person who's editing the -- it's going to be an issue that's specifically related to pediatric issues. And I have to -- it's not somebody that's a colleague of mine that I know very well, so I have to look it up.
Q What journal is it?
A It's the same one that No. 13 -- it's the same journal. They liked the contribution that I made and they want me to write some more.
Q So that's the --
A NCBE Quarterly, yes.
Q -- NCBE Quarterly, National Catholic Bioethics Quarterly.
A Actually, I was just asked to write a review article for the International Journal of Pediatric Endocrinology as well. I have not yet agreed to do that. The editor requested that I write that, so I'm happy to consider whether I have the time to do that, so --
Q So, you saying that these two articles that you've written about transgender issues, the Growing Pains article and The Use of Cross-Sex Steroids article -- is that okay if I use that shorthand to refer to them -- that they were both

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peer reviewed?
A As I mentioned, they were both reviewed and I think that most of these happened at the level -- again, I don't have knowledge of who they sent them out to. My understanding is that they were more of the editorial level where they were reviewed. I know for a fact that they requested every single reference that I had, that I sent to them, they're able to see the actual scientific data that I quoted in the papers there, and they have a number of very pointed questions about the interpretation of those studies, so I know, from that experience, that they were rigorously reviewed for accuracy and scientific integrity.
Q Okay. So, the Growing Pains article was published by something called The New Atlantis, that's right?
A That is correct.
Q And your testimony is that that's a scientific, peer-reviewed journal?
A I would say The New Atlantis is what it is. And if you go to their website and the publication, they will explain exactly what they put forward for what they are. It is a journal that covers a range of topics related to science and

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other areas and so it's certainly different than, for example, The Journal of Diabetes. It's more broad. And, again, many of the review articles are generally journals that published in a variety of areas, not specifically related to diabetes.
Q So, you say The New Atlantis is what it is. So, is it not -- is it a type of peer-reviewed article the type people in your field would rely on for scientific evidence?
A I think people in my field read all sorts of publications, including the review articles that are listed in other areas of my CV. And they, again, as I do as well, reading whatever literature is there, most often individuals that read publications of this nature will use that as a resource to look at the primary literature that is cited in the article and then be able to use that in helping them form their opinions about the evidence that's there. So I think that that's what we do in our field.
Q So, when you testified in the -- or when you gave a deposition in the Adams case, I'm happy to show you the transcript, but you testified it was not a peer-reviewed journal. Have you learned something about that since then that changed your

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mind?
A No, I think in depositions the flow of the way the questions are asked, you know, depends on -- I don't recall, specifically, how the question was asked or how it was presented in the context of the other things that I said in that deposition, but I've already broken it out on my CV as far as how these type of publications differ from the other 50 that I've published as far as the external peer review. So you asked me the question about whether they were reviewed and I said, yes, they were, at the editorial level. And the question, as I recall, and I don't -- I can look at the full transcript of the Adams case, at least as I interpreted the question as it was asked at that time was slightly different than the way you asked the question.
Q So, it has no external peer review, is that correct?
A To the extent that I'm aware of, I don't -- I don't believe that it was.
Q So the term "peer review" doesn't have a meaning in your field? That's not an understood term?
A So, editorial review versus peer review are different. So that -- that my co-authors were

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people in the field, but I think the editors that were reviewing the factual information that was present were not pediatric endocrinologists.

Q So, well, I'd asked whether it was peer reviewed. So is it peer reviewed; The New Atlantis article?

A On that definition, it was not reviewed by other pediatric endocrinologists, to my knowledge.

Q That's the definition you understand to be the definition in the field?

A As we're discussing it currently, right now, yes.

Q Okay. And The New Atlantis was founded by The Ethics and Public Policy Center, is that right?

A I believe that that is correct.

Q Okay. And that's a center dedicated to applying the Judao-Christian moral tradition to critical issues of public policy, is that your understanding?

A I believe that question came up at the last deposition and I believe that that's an accurate statement.

Q And your co-authors of the Growing Pains article are Lawrence Mayer and Paul McHugh, is that right?

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A That is correct.

Q How did you come to meet them?

A I believe I was approached -- again, this is going back a couple years. The editor of the publication contacted me, asking me, within my realm as a pediatric endocrinologist, if I would be willing to discuss this particular question and we had a meeting with the eventual co-authors where we discussed the status of the science. I think the editor himself was aware of some of the concerns that I had put forward in relation to the treatment that was going on. I am not fully aware of how that came about, that he contacted me, but that is how this particular publication came to be. We had a meeting to discuss our shared concerns about the lack of scientific evidence that was out there in this particular field, felt that there was a strong need to be able to convey that and be able to set forward some of the things that needed to be done at the scientific level to enter this area of intervention in line with other areas of medicine.

Q Okay. What year was this that you first were contacted by the editor of the journal?

A This was published in 2017, so I believe it was near the end of 2016.

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Q And who was the editor?

A Adam Keiper.

Q And how did he know of you?

A You'd have to ask him.

Q Okay. Let's mark as Exhibit 2 the second article that you mentioned; The Use of cross-sex Steroids in the Treatment of Gender Dysphoria.

(Deposition Exhibit 2 marked.)

Q Thank you. Is that a copy of your article that was Item No. 13 on your invited publication list on your CV?

A It certainly looks like it.

Q And that was published in 2018?

A That's correct.

Q And it was published by The National Catholic Bioethics Quarterly? That's the full name of the journal?

A That's correct.

Q Okay. Is that a peer-reviewed, scientific journal?

A In the context of what we're talking about, no.

Q Okay. Meaning it was not sent out for external review by peers in your field?

A That's correct. And I talked to the

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editor about doing that and he indicated that he was -- felt that it was of sufficient quality, after looking through the data that was there, that he made a decision not to do that. I think in this journal itself, I think that very frequently these are sent out to peers and, again, what happened at the editorial level, I'm -- I don't know all the details of that.

Q Okay. We'll come back to that in a minute. I just have a few other questions first. Have you given any presentations about gender dysphoria or transgender people or related issues at scientific or medical conferences or events?

A I've certainly given them at medical grand rounds in a variety of venues. I think, from the scientific standpoint, at national meetings, I've not been invited to do so, at least to this point in time.

Q And where have you done medical grand rounds on this topic?

A I think I listed them on my CV. Didn't I? It was St. Louis University. I'm going, actually, next week to Texas Tech to give another talk.

Q And that's on gender dysphoria?

A Yes.

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topic.
Q So that's a no; you were not aware that that was the -- how the conference was being held out?
A I have not seen this document before. I certainly know the conclusions that many that were organizing the conference had serious concerns about what it was going on. I think the biggest conversation I had was the concern about how much ideology rather than science was driving the field forward. And that discussion was raised when I spoke to the organizers about this. So, I think that what they were putting forward was concerns about ideology-driven medical interventions. And to that extent, I knew that they were opposed to the ideology that was being put forward.
Q Let's talk a moment about The Heritage Foundation event. Who asked you to come to that event?
A That was Ryan Anderson.
Q And when did you first meet Ryan Anderson, whether on the phone or in person?
A I honestly don't remember. It was several years ago.
Q How did you meet him?

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A I believe -- I think about -- I honestly don't remember whether he contacted me or we ran into each other. I don't remember.
Q Okay. And he asked you to participate in this panel discussion?
A That is correct.
Q Okay. And The Heritage Foundation is an organization that opposes recognizing legal protections for transgender people, right?
A Again, I don't follow any political agenda at all. My interest in participating in that was to be able to put forward the concerns that I had, The Heritage Foundation invited me to speak, I'm very willing to speak to any other organization from any area of the political spectrum that is willing to listen to my concerns.
Q You've talked about the scientific literature on treatment of gender dysphoria. When did you first begin to review that literature?
A I first began investigating the scientific literature when I was charged as chief of our division of endocrinology when a proposal was made to begin the transgender clinic at my institution. That prompted me to begin investigating the literature, began formulating a number of questions,

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looking for the answers to those questions, and progressively necessitated that I take it to a deeper and deeper level to understand when I wasn't finding the answers that I was looking for.
Q And how long ago was this? What year, approximately?
A It would have been about six to maybe seven years ago.
Q Okay. So before that, it was not an area that you kept up with in the field?
A That is correct.
Q Okay. And before you began to review that literature for purposes of the questions that were being posed by your institution, did you have any views on the morality of cross-sex hormone therapy to treat gender dysphoria?
A It was a topic that, again, was becoming prevalent in the dialogue and it was -- the only exposure I had to that, that I even thought about it, were a few case reports that some of my colleagues had mentioned within -- probably within a short time before that, but it never got beyond just presenting. I can recall our former -- the division chief prior to my service in that role who had a patient, and we had a very brief discussion saying,

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They're coming to me and I have no idea what I'm supposed to do.
Q So you didn't have any moral views about this -- the treatment with cross-gender hormones at that time?
A This was not an area that had ever been discussed in any way.
Q So no?
A The answer is, related to gender dysphoria and treatment, no.
Q Did you have any moral views about people transitioning gender before then?
A It wasn't a topic that was on my radar. Certainly I had a very clear understanding, from a scientific perspective, of what it means to be male and female and I do recall, in the early comments that were being made, about inerrancies about talking about what sexuality was that created some conversations that we had. Again, it wasn't specifically related to the Dutch protocol or the treatment protocol that we're talking about right now.
Q What was it related to?
A These were comments where people were confusing the words "gender" and "sex" and that was

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court in any of these cases, is that right?
A I've already said that I don't -- I never testified at trial.
Q Okay. Do you consider yourself to be an expert on treatment of gender dysphoria?
A I would say that I probably have more information about the scientific literature than most of my colleagues in pediatric endocrinology that I talk to across the country.
Q Is that a yes?
A Yes.
Q Do you consider yourself to be an expert on the treatment of gender dysphoria in adults?
A To the extent that the literature that I've reviewed addresses the issues involved in adults, yes.
Q And what makes you an expert on this topic?
A You know, people can define expertise in many different ways. I'm a physician scientist who has participated in the review of clinical trials for study sections. I've been a reviewer for journals. I've looked at scientific evidence in great detail in determining the veracity or the deficiencies of scientific literature and because of

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my necessity of investigating the specifies of gender dysphoria in my relation to my role as a division chief, as I mentioner earlier, that I have extensively read the literature and have detailed knowledge of the quality of the science that's present. In that domain, I have expertise to be able to speak in this matter.
Q Let's go back to what we've marked as Exhibit 2; The Use of cross-sex Steroids in the Treatment of Gender Dysphoria. I have some questions about this. You mentioned it was published by The National Catholic -- sorry, The National Catholic Bioethics Quarterly. That's a journal that integrates Christian faith and science, is that right?
A This is a journal that addresses areas of medical ethics. The context of this is that, recognizing that much of the discussion that I was being involved with required more formal education in the area of bioethics prompted me to take a formal course on bioethics. This paper came out as the final exam paper that I wrote. Never intended that I was going to publish it, but it was of the quality that the editor felt very strongly that this is something that needed to be published and I

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agreed to have it published.
Q Why did you initially not intend to publish it?
A I just -- I hadn't written it for that purpose. I wrote it as the final exam for the course. It wasn't that I had no desire to publish it. It hadn't occurred to me that it would be wanted to be published.
Q I'm sorry if I missed this, when was this course?
A This was last year.
Q Where did you take this course?
A It was a correspondence course with two separate meetings where I got to travel to Arizona and Philadelphia, but most of it was online.
Q What institution?
A The National Catholic Bioethics Center.
Q They teach -- they provide the coursework?
A That's correct. I actually looked at a number of different ways to get this education that would fit with my schedule, and for the questions that I was asking, and this was the best option that was available to allow me to get the expertise in some of these ethical issues to help me in some of the questions that I was still asking.

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Q Okay. So, The National Council -- The National Catholic Bioethics Center did the course as a correspondence course, but you had some in-person portion of the training?
A Two separate; one at the very beginning and one at the very end, correct.
Q You said one was Arizona and one was?
A Philadelphia.
Q Philadelphia. Okay. And were the other students who were taking the course also present during those meetings in Arizona and Philadelphia?
A Yes.
Q Okay. Was Dr. Sutphin one of those students?
A I don't recall, no.
Q Do you know Dr. Sutphin?
A No.
Q You've never met -- okay. So, going back to a question I asked before, I'm not sure I heard an answer, The National Catholic Bioethics Quarterly, I asked if it's a journal that integrates Christian faith and science. Is that your understanding of the journal; that it does or doesn't?
A I think it's a journal that publishes

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quality information related to bioethical issues and I think that that's my understanding of the journal.

Q So your understanding is it does not integrate Christian faith and science?

A No, I think it certainly does. But I think that, looking at the options for ethical questions, they probably do that in the most comprehensive manner.

Q And the course that you took with The National Catholic Bioethics Center, did that integrate Christian faith and ethics, medical ethics?

A It certainly included the discussion of the ethical directives, the ERDs, which is a publication of a faith-based organization. That was one of the components of what they discussed, that's correct.

Q Okay. Let's mark as Exhibit 4 a document titled, About The National Catholic Bioethics Quarterly.

(Deposition Exhibit 4 marked.)

Q Have you seen this before?

A I don't believe I have.

Q I would like to just direct you to -- I'd like you to read along with me. It's actually quite

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short so I'll read the whole thing. The National Catholic Bioethics Quarterly addresses the ethical, philosophical, and theological questions raised by the rapid pace of modern medical and technological progress. It is the official journal of The National Catholic Bioethics Center, an organization dedicated to research of analysis on moral issues arising in healthcare and the life sciences. The Quarterly seeks to foster intellectual inquiry on moral issues by publishing articles that address the ethical, philosophical, theological, and clinical questions raised by the rapid pace of modern medical and technological progress. Inspired by the harmony of faith and reason, the Quarterly unites faith in Christ to reasoned and rigorous reflection upon the findings of the empirical and experimental sciences. While the Quarterly is committed to publishing material that is consonant with the magisterium of the Catholic church, it remains open to other faiths and to secular viewpoints in the spirit of informed dialogue. Is that consistent with your understanding of the journal?

A Yes.

Q Okay. And what does it mean to be consistent, or consonant, with the magisterium of

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the Catholic church?

A It means that the -- what is being discussed does not conflict with what the church has put forward. The church is very clear that it is competent in areas of theology. Not science. I'm competent in the area of science and not theology. And it's a perfect mix.

Q Is your article consonant with the magisterium of the Catholic church, the one you published in the NCBE journal?

A The fact that they published it, I assume so.

Q Okay. Now, let's go back to your article that you published in this NCBQ journal. Sorry, I'm having trouble with all the initials. Let's look at the abstract at the top and I'd like to --

MR. JOHNSON: You have an exhibit number?

Q (By Ms. Cooper) It's Exhibit No. 2. If you will look with me about a little more than halfway down the abstract, the sentence beginning, "from an Ethical Perspective," have you found that?

A Yes.

Q Okay. And read along with me. From an ethical perspective -- actually, I'm going to read the whole thing to make sure we have context. It's

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not that long; Current clinical guidelines for the treatment of individuals who experience gender dysphoria include the administration of testosterone to women who desire to appear as men and estrogen to men who desire to appear as women. Despite the rapid and widespread adoption of this practice, strikingly little scientific evidence supports this treatment approach as a safe and effective medical intervention to prevent associated depression and suicide. Although low-quality, short-term studies have demonstrated a reduction of dysphoria, emerging evidence reveals a significant bodily harm -- sorry -- reveals significant bodily harm from this practice and a lack of long-term benefit in preventing depression and suicide. From an ethical perspective, this practice distorts a proper view of human nature and violates bodily integrity by directly inducing sterility. The use of exogenous cross-sex hormones reinforces rather than alleviates underlying psychiatric dysfunction while significantly increasing the risk of other medical morbidities. Despite the valid goal of alleviating suffering, this practice cannot be justified by the use of the principles of totality for double effect. So I just have a few questions about that passage.

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individual, if you reject that, you're going to lose sight of some very important data that is necessary in being to able to address this problem in the best way.

Q And what are the consequences that you were referring to of losing sight of the biological reality of differences in male and female?

A I've already alluded to that briefly in my prior response, but I will begin by looking at what the effects are, for example, of cross-sex hormones, administration of testosterone to a male member of the species versus a female member of the species is not identical, because the context of what you're delivering that hormone exposure to is within an environment that is drastically different, at a genetic level and epigenetic level, and the consequences of that are quite important. It's the sole basis for why The National Institute of Health requires, when we do clinical trials, that we study both male and female members of the species. When you give exactly the same medicine, it is recognized that the effect of that treatment can be drastically different in males versus females. It's a recognition of this fundamental biological difference between males and females.

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Q So, given that, is it fair to say your view is that any treatment that would not accept the biological reality of someone being male or female is not going to be helpful?

A I would say that it's going to lead to concerns that it may lead to attempts that are not helpful. I think that there's so much involved in that question that's much more broader than that. I think that if you start with incorrect assumptions and things build from there, it is likely to have a negative impact on the desire that everyone shares about alleviating the suffering of these individuals.

Q Okay. So, you talked about the procreative roles of males and females. Is it your view that sexual activity between same sex couples is not consistent with the proper view of human nature?

A Again, it's how you frame that question. Actually, I'll ask you to reframe that because I'm not sure that I understand exactly what you're asking.

Q Sure. Well, you say in your paper that, you know, from an ethical perspective, administering cross-sex hormones to treat gender dysphoria distorts a proper view of human nature. And you've explained -- you unpacked that for me some and so my question is: Is sexual activity between same sex couples consistent with a proper view of human nature?

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A I still don't fully understand the question. If you're asking me the question about how does homosexual relations contribute to the process of reproduction? Are you asking me --

Q I am not. Thank you. My understanding is your focus on sort of the biological reality of male and female was very hooked to the reproductive capacities of males and females, is that correct?

A That was one component. It also included an understanding of the biological differences that are present between males and females.

Q Okay. I see. Now, you say in that same abstract that using cross-sex hormones reinforces rather than alleviates the underlying psychiatric dysfunction. Is that true for adults, too, adults with gender dysphoria; that providing cross-sex hormones reinforces rather than alleviates the psychiatric dysfunction?

A So, the argument that is being put forward, again, in the context of the discussion is

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to deny this difference that we just discussed about male and female and the literature is actually full of statements that are being made in twisting the language that is being used to identify male and female in the wording that they have and further discussion of how that hormone administration is even being presented as an intervention for gender dysphoria is within that context of the same -- it doesn't change when you turn 21, whether you have biological differences between male and female, and your responses to the hormone therapy are still going to be the same in adults as they are in children, as far as the medical risks, many of which we do not fully understand, have not been adequately studied, but what we do have certainly has -- we have reason for caution in certainly the data that's coming out now about the medical risks of this cross hormone administration. So I think that there is a danger of minimizing the true differences between hormone therapy in, again, giving testosterone to a male versus testosterone to a female and the outcomes that are going to happen. This happens even independent of the question about whether it prevents the goal of suicide. But, also, in the risks that individuals have of dying from other

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A I think the way that he's remembering that conversation is slightly different. I did express my significant problems with the issue and I did relate at that point in time to understand the claims that were being made about sexuality and how that differed from gender. And, you know, I think he's taking it out of context to say that it was a matter of faith. I presented to him scientific objections to what was going on. In fact, it was my conversation with Dr. Spack that specifically led to my desire to write The New Atlantis article because in the course of that discussion, I raised number of questions about the scientific evidence for cross hormone therapy, which he was not able to address in a substantive way. And I distinctly remember during that conversation that Dr. Spack said, Well, at least if you can't accept that, why don't you just give them pubertal blockade? Because this is safe and fully reversible. I reflected upon that assertion on the evidence that was available to support that statement and it was really one of the impetuses for me to write that New Atlantis article. The fact that we had discussed faith within that conversation was -- it was a panel group, this was a group around. There were a number of other

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individuals there. There were a number of different viewpoints that were discussed. And the fact that issues of faith came up, I think, was relevant to that particular conversation, but there was never a statement that was made by me that said that I had made a definitive conclusion about this whole issue and my problem with the whole area of transgender were many of the incorrect statements that were being made about an understanding of what sexuality is from a biological perspective.

Q So, you didn't say that your faith caused you to object to this treatment?

A I made it very clear that I had scientific objections and, in the course of the conversation, that there are many different concerns that I have about the issue, but that was -- to say that it was a matter of -- versus meaning that it was a factor in trying to understand what was being put forward and, again, in the context of my understanding of sexuality, I think, as a physician scientist, it's important to focus on, from a biological level, what's going on, but it is impossible to confine that solely to that particular domain, in the areas of competence, in talking about it as a scientist. That's where I focused my efforts and my energies

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related to the other aspects of understanding at a much deeper level the other things that contributes to sexuality is certainly something that all -- that I have, that everyone has that's involved in this discussion. We've had a long discussion about people that have different viewpoints about this from a non-scientific standpoint, all of which is relevant in understanding. It's my only explanation for why individuals like Dr. Brown can put forward, you know, statements that -- that don't address these fundamental issues of biology; is that there are influences that are beyond science that are helping to influence that.

Q Okay. So, did I hear correctly that your faith was one factor that leads you to oppose treatment with -- for gender dysphoria with hormones?

A I think that the discussion of why the objections are and where I maintain my concerns is in the area of science and medicine. To say that I have viewpoints or have ideas that are not based on that, as I said previously, I direct my decisions about clinical care based upon clinical evidence and, yes, there are areas that -- that morality need to dictate where one sets the boundaries of whether

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they practice medicine. And in that -- that applies to every single practitioner. Nobody is immune from that. Again, that's, I think, I believe, where that conversation went when we began, different members, and I think that if I were to make a similar statement about Dr. Spack's comment, I would say the same thing about him; that there were things in that discussion that were made by colleagues in that room that reflected the same level of consideration within that context. It was a very fruitful discussion from that standpoint, but I think we were very well, as I said earlier, to distinguish what was science and what was not. And I think that that's where we want to maintain the discussion.

Q But I still need to get clarity on -- did you or did you not tell Dr. Spack that faith was -- you did have a faith-based objection to hormone therapy for gender dysphoria?

A I don't remember the exact words that were used, but I believe the discussion had to do with the bigger understanding of what sexuality is in that conversation.

Q Do you have a faith-based objection to providing hormone therapy to treat gender dysphoria?

A I have a scientific concern about what is

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being put forward as an optimal therapy for individuals that have gender dysphoria and that is the area that I think needs to be addressed.

Q I understand. But do you, separate and apart from that, have a faith-based objection to providing hormone therapy for individuals with gender dysphoria?

A I would say that you'd have to ask that question of how it's being proposed to be put forward for the treatment of individuals. And I've discussed this. In fact, my whole discussion in that article about the concept of totality is an ethical objection that relates to what is being proposed to being put forward, so there is certainly an ethical understanding of the application and it has much to do with -- actually, has everything to do with what's in the best interest of the individual.

Q But I'm still asking about, Do you have a faith-based objection to providing hormone therapy to people with gender dysphoria to treat gender dysphoria, cross-gender hormones?

A It is a scientific concern about what is being put forward, with the goal, everything that I do in medicine is geared toward what is in the best

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interest and for the best outcome for that individual. And the objection that I -- or the concern that I have about what is being put forward is that there is no scientific evidence to base what is -- was being put forward as definitive answers to this particular problem.

Q I understand that, but I still am not getting an answer. Do you have a faith-based objection, apart from your scientific reasoning, to object to transition-related care for gender dysphoria?

A Are you asking the question about whether I dichotomize faith and reason and lead them as separate domains or are considered together?

Q That's not my question. Do you have a faith view on whether transition-related care is appropriate or --

A As I understand your question, that is -- again, you can clarify for me, but that -- the way the question is being asked is that is there a separation, because you're asking a question about theology, when I'm testifying as a physician scientist, and I will say that faith and reason address different domains. They are ultimately directed toward truth and to the extent that they're

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not contradictory, they provide different dimensions to both domains. So that -- what you're trying -- I understand the question is that am I able to make decisions that disassociate the factual basis of science from faith-based issues. And they are, as I see this, is that they are complementary. They address different domains. And to the extent the science drives the question, so that the science is not a contradiction to, at least as I see it, to anything that I hold to a matter of faith, that the science itself should answer the question as it's competent to do so. And from a faith-based perspective, having the understanding that that science is not going to be in contradiction to any faith-based statements that might be made. That's where my domain as a scientist and physician is very relevant and able -- I'm able to practice in a way that can focus on the science without even having to invoke any personal views that I have related to faith.

Q I understand. But, again, I'm still asking: Do you hold any personal views, faith-based views, about the appropriateness of transition-related care, about treating -- about gender transition?

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A And I'm not trying to be at all evasive. I'm trying to answer the question because you're asking me whether I am driving my decisions based on faith.

Q I didn't ask you that. I just asked if you had faith-based views about gender transition.

A I have faith-based views about what sex is beyond science and it's not in contradiction to what I hold from a scientific standpoint and what is driving my decisions about clinical care is the science, not the faith.

Q So you have faith-based views that are consistent with your scientific-based views?

A They are different domains. They are different disciplines. They address different issues. And they are not in conflict with that, but I think that the discussion about faith is irrelevant to the question of what is the best medical practice, because this relationship between faith and reason, between what the science can answer and what science cannot answer, is not in contradiction.

Q So, if faith is not relevant, why did that get brought up in the conversation with Dr. Spack?

A I didn't say it was irrelevant. I said

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that it was not -- not the driving decision-making factor, being honest about -- to the extent that they're not in contradiction and that that came up in the topic of conversation, at the end of the day, my recollection of this meeting was not that I objected or that anyone in the room objected on the basis of faith-based reasons. It was solely based upon the objections from the lack of scientific information.

Q Okay. Can we turn to Page 665 of the same article? Oh, thank you for reminding me. Let's take a break. This is a fine breaking point. Sorry.

(Break Taken.)

Q Let's go back on. Returning to your article, The Use of cross-sex Steroids in Gender Dysphoria, Exhibit 2, if you can turn to Page 665. And I'm going to read a passage that I have some questions about, under the heading, Biological Sex and Anthropology. Okay. If you'll read along with me; Before exploring the medical aspects of cross hormone administration, consideration of the basic biology of human sexuality exposes a violent distortion of fundamental anthropological principles in the new gender mentality. Reproduction is the

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primary purpose of sex, not just in humans but also across the entire animal kingdom. It is objectively irrational to accommodate contrary thinking by rejecting a male or female body that is fully competent with respect to its innate reproductive purpose. Cross sex hormones, by their very nature, render an individual incapable of fulfilling the intrinsic biological role of the human body as male or female. Although potentially reversible after a short-term administration, the effects of cross-sex steroids on fertility are expected to be permanent when treatment is started in children. The readily-accepted view that reproductive capacity can be disassociated from what it means to be male and female, which has grown from the seeds of, quote, biological mutiny, closed quote, that began with the acceptance of contraception as a solution to difficult social circumstances must be held to close scrutiny in assessing the morality of cross-sex steroid use. Okay. My first question: What do you mean by it is objectively irrational to reject a male or female body that is fully competent with respect to its innate reproductive purpose?

A Similar to what we've previously discussed, I think to make the claim that male and

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female does not mean what male and female means is an irrational statement. When you reject or try to re-define what maleness is from a biological standpoint, or femaleness is, that is the error that is being made there.

Q What do you mean by the term "biological mutiny"?

A I think it's a rejection of basic biological facts. So the arguments that are put forward from the ideological perspective and the non-scientific realm, you know, the attempt that I've made, many times, is to understand the logical thinking that's involved, or I should say illogical thinking that's involved in there, that were put forward statements trying to conflate or distort what we mean by sex. And including statements that are made that gender is sex. It is -- the only potential explanation that I've been able to come up with is that that is based upon that rejection of that fundamental understanding of what sex is.

Q Is that a term you coined; biological mutiny, or does it come from some other context?

A You know, when I wrote that, it was put in quotes because I remember hearing it somewhere. I couldn't cite anybody in particular. That term

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seemed to ring a bell; as far as it's the rejection of what's obviously true, from a scientific biological perspective, and that's the basis that allows one to put forward an ideology that -- that basically says that you can define sex as any way that you'd like.

Q When did you first come to consider transition-affirming treatment to be, quote, biological mutiny?

A I can't define a particular time that I did this. I think, as I served as an expert witness in earlier cases, was to the extent that I had seen statements made by other so-called experts that were starting to make these claims that reproductive capacity had nothing to do with sex; that it could be defined in all of these other ways that reached the level that I would put in the strong term of mutiny to be able to come to that conclusion. I think it was probably in the context of my serving as an expert witness in seeing other people putting forward this ideology that began to seem so contrary to what we understand from a scientific perspective.

Q So you point to contraception as an example of biological mutiny. Can you explain that?

A So, the ability to separate out the

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that are providing that, that is correct. They're denying the biological reality that's there and it's evidenced by the statements that they've made.

Q Who -- I'm sorry, go ahead.

A Well, in some of the cases that I -- if you look at the declarations, for example, Deanna Adkins and her declarations specifically says that gender is sex. That is a statement that she has made. And she says that the chromosomes and hormones are irrelevant to what one's sex is. That's a statement that's being made. And I think -- I haven't told everyone that's providing this care, but I know there are more than a few that are forgetting the biological reality of what they're doing.

Q So, is it fair to say, then, if there were studies that meet the standards that you believe are appropriate and they demonstrated the safety and effectiveness of cross-sex hormone treatment for gender dysphoria and the long-term safety and effectiveness, you wouldn't disapprove of that treatment? You would support it?

A I think that that's what we're all -- we're all after the answer of how we -- we recognize, you know, that these individuals that

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have gender dysphoria are troubled. They have poor outcomes. You know, all the things that go along with it. And I think we all share the same goal of alleviating that dysphoria, preventing all of the consequences there, and to the extent that you desire that we validate this, that's what we're all about. That's what we do as physician -- physicians and scientists. So that if that was the outcome that was definitively established, then -- then I think that we would accomplish the goal and I think, in the context of this ethics paper, that's exactly what I'm saying. The objection is that we don't have that data to make the intervention and we have reasons to believe that that is unlikely that that's going to be the answer. But that's a big "if" that you propose, but if that's what the science shows, you've got to follow the science.

Q Okay. I'd like to talk a little about the transgender clinic that you mentioned at St. Louis Children's Hospital. Am I right that that opened last fall?

A Yes.

Q Okay. It's called the Washington University Transgender Center at St. Louis Children's Hospital?

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A Yes.

Q And that's within the pediatric endocrinology clinic where you work?

A It's jointly with the adolescent medicine and pediatric endocrinology.

Q Both?

A Yes.

Q I think you mentioned the idea for creating that clinic was proposed about six or seven years ago?

A That's correct.

Q Who proposed that idea?

A There was two of the endocrinologists, Dr. Hollander and Dr. Lewis. Dr. Lewis, a fellow -- actually, I'm trying to think back then. I believe he was still on board there when this came on board. Initial discussions were Dr. Hollander and Dr. Lewis.

Q And you were the chief of pediatric endocrinology at the time?

A Yes.

Q And I understand you talked earlier about reviewing the research when this proposal was presented, and do I understand that you came to the conclusion that the transgender clinic was not -- at

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least what they had in mind was not in the best of interest of patients?

A That is correct.

Q And did you let officials at the university know that was your view?

A We had ongoing conversations over an extended period of time about that, yes.

Q And was that with the head of pediatrics? Was he included?

A So, it was with the vice president of Children's Hospital. It was with the chairman of pediatrics. It was with some of the other colleagues in the endocrine division, that is correct.

Q Who made the decision to approve the center?

A It goes through a number of different channels, so ultimately it came from the university and Children's Hospital as a whole.

Q Okay. What's your understanding of why they approved it over your objection?

A I don't have a definitive answer of that. I have only speculation.

Q What's your speculation?

A I think that some of the people that were

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advocating for that, those that have not read the literature as extensively as I have, including Dr. Lewis and Dr. Hollander, in their -- like all physicians, they believe that they are doing the best thing. I think the elements of the hospital itself is to position themselves in an area of being cutting edge and not contradicting the push that's going on across the country to offer these services. There are certainly financial incentives, PR incentives, and medical incentives, and they're all mixed together. I think the people that are directly involved in the care are doing this with the belief that they're actually doing good.

Q And your opposition to the formation of the Transgender Center at Wash U was one factor that contributed to stepping down as chief, is that right?

A It was one factor. There are many other factors that were probably predominant. It was a significant factor, but it wasn't the sole reason. I'm a physician scientist and I have a very exciting drug discovery program that I'm involved in right now that's generating much more of my time. We had a transition of leadership from chairmen and deans and now we have a new chancellor as well. So there

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are different directions that were taken at the university level. There were, you know, assessing, after doing this role for five years, of what I enjoyed about my clinical practice in the scientific realm versus the administrative realm versus the teaching roles that I have. In my clinical care, you know, became more and more apparent that I would find more fulfillment in the other areas of my professional activity.

Q Were you asked to step down?

A We had a discussion about what was best, you know, for my own career, where my own interests were and where the goals of the division -- since our new chairman came on board, more than half of the division chiefs have turned over. I think it's a desire by the current chief to be able to frame the department of pediatrics in the mold with the priorities that he has set forth for himself. I will say that the tenure that I have as chief parallels the last four division chiefs. It's a very demanding job. It's a service role that we undertake. I never signed up to be a physician to be an administrator and so, in the end, you know, this was something that made sense, to be able to transition that leadership.

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Q So, someone did ask you to step down, is that right?

A We had a conversation about what was in the best interest of my own professional career and the department of pediatrics and the decision was made to be able to transition that.

Q So it was just your decision, it was not a decision by the other folks in the department or the hospital?

A It was -- the decision was made in conversation with the new department chair, did not involve any of the other faculty and so -- but yeah.

Q And, in those conversations, did the issue of the Transgender Center come up as part of the issues supporting you stepping down?

A Yes.

Q Anything else related to that? Any complaints about you by patients or other professionals at the hospital?

A No.

Q And I understand the Wash U Transgender Center has adopted the Endocrine Society Guidelines and the WPATH Standards of Care for treatment of gender dysphoria, is that your understanding?

A They're modeling the care that they

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deliver based upon the guidelines that were put forward by the Endocrine Society, correct.

Q Okay. All right. And the center, the Transgender Center, offers mental health counseling, puberty blockers, and cross-sex hormones to patients, is that right?

A If you're getting that from the website, there are many components of what they're offering, but that is many of the major components of what they're offering, yes.

Q That's included among them?

A Yes.

Q And the doctors at the Washington University Transgender Center include colleagues of yours within the department of endocrinology, is that right?

A Again, Dr. Hollander is in the process of retiring, Dr. Lewis graduated from his fellowship, assumed the leadership of that six months into his faculty career. And there are a handful of physicians that assist in that endeavor. When I had private discussions with -- with the faculty in my division, there were varying levels of support or discomfort in what was being put forward. Half of my faculty didn't want anything to do with it for

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A I don't know.
Q Okay. Does the Transgender Center help patients get medical insurance coverage for hormone therapy for treatment of gender dysphoria?
A To the extent I'm aware, because I don't directly participate in that clinic, I know that at the time that I was involved in this, I know that there were efforts specifically for pubertal blockade to be able to get that approved and routinely these were being denied at the time that I was involved in that care. And the basis for that was that it was not FDA approved for that indication and generally the -- they were trying to petition the insurance companies to provide that care.
Q Okay. In your view -- that was before the Endocrine Society Guidelines came out, is that right; those insurance denials?
A That's not correct. The first guidelines came out in 2009. The revised guidelines came out last year. So they were already out at that point in time.
Q Okay. The revised guidelines are the guidelines, right, that address puberty blockers and other hormone treatments for individuals with gender dysphoria, is that right?

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A I think both guidelines had elements of that. It's interesting, as you look at the evolution of the text that was used, some of the areas, the discussion of the 2009 versus the 2017 guidelines, they have reflected some of the discussion that's gone forward as far as putting this forward as being safe and effective and fully reversible in a way with -- I'm more familiar, you know, the issue of social affirmation was one area in the 2009 guidelines that were cautioned against because of the desistence rates. That was moderated in the 2017 guidelines and without any new scientific evidence, actually, to support that. It was one of many areas that I've looked at in looking at the data that's put forward. The area of pubertal blockade has never been studied in a scientific manner. It's not approved by the FDA for treatment of gender dysphoria and that was true in 2009 and is true today.
Q Okay. So, in your view, the care that's being provided at the Transgender Center at Washington University is not in the best interest of the patients affected?
A With the information that we have currently, yes.

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Q Okay. I think we touched on this earlier, but I'm not sure I asked this specific question. So, in -- when you're treating patients for the various endocrine conditions you treat, you've had patients -- one or more patients indicate gender identity issues, is that right, relating to gender dysphoria?
A Gender identity issues, yes.
Q Okay. And this is putting aside the young people in the DSD Clinic, we were -- right? I think we talked about distinguishing between the folks with DSDs and folks who don't have DSDs.
A Well, distinguishing people that have normally formed and functioning primary and secondary sexual organs that have issues with gender, yes.
Q So you've had patients that you were seeing for other conditions that -- where that has come up?
A Not directly, but as we talked about before, yes. I mean, not in being asked to make a diagnosis of gender dysphoria. Not even being asked to refer them to anywhere else, where either the patient or the parent will express, you know, questions, about their development going on, how

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they like to dress, how they like to appear, trying to explore whether some of the issues of depression that they're experiencing are relating to that or other issues, in that context, yes.
Q That has come up with patients?
A Yes.
Q And what -- do you refer those patients to the Transgender Center?
A No, I generally refer them to our psychologist who -- actually, there's been turnover of the psychologists that's been participating in that clinic, and I'm not directly involved, but I had a very valued colleague that we used to refer to that I think provided for any of the patients that had any psychological issues. And we struggled with getting adequate psychological support across the board for many different conditions. I know for a while, when we were without a psychologist, you know, in trying to -- for a period of time and I think, again, I don't stay involved right now, I do know that patients that need to have psychological care have a waiting list of six to nine months and I'm often referring them to outside psychologists, school counselors, and things like that, to provide guidance in all of the psychological issues that

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A Mark Regnerus and I think that was all that were kind of rounding out --
Q So they were all at the second meeting making these presentations?
A Correct.
Q And you presented on endocrinology?
A On the pubertal blockade issue.
Q Is this helping you remember anyone else who was there and presented?
A What you've said, yes.
Q You think that's everybody?
A Probably not, but certainly rounding it out.
Q Did Walt Heyer present --
A He did.
Q -- about his own experience?
A Yes.
MS. COOPER: Okay. I think this is a good time to break. Let's go off the record.
(Break Taken.)
Q (By Ms. Cooper) Okay. Just a few questions on the etiology of gender dysphoria or being transgender. Do I understand that your view, or your opinion, is that the scientific community does not yet know what causes someone to have a

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gender identity that is different than their sex assigned at birth?
A That's correct.
Q Genetics may play a contributing factor but we don't know yet?
A I think all of the available evidence suggests that it's multifactorial.
Q Including genetic and what else?
A Environmental.
Q Environmental. Is there another factor?
A Well, there's all sorts -- no, I mean, I think there's lots -- so, there's evidence for genetic contribution. There's evidence for environmental contribution. There's some hypotheses about hormonal influences. And the important thing is that any one individual, the contributing factors may very well differ.
Q Okay. What treatment do you consider appropriate for adults with gender dysphoria?
A So, as far as the -- maybe you can define better for me what you mean by treatments so we're talking about the same thing.
Q Medical treatments or any -- well, let me -- I didn't think that was a confusing term. So let me think about a different way to ask it, if it

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was confusing to you. Within the medical or mental health fields, are there appropriate treatments for gender dysphoria, in your view, for adults?
A Yeah, so I -- again, I guess I was -- the question I had more is what is the goal of the intervention that you're proposing and in defining it as preventing suicide, preventing -- defining it as alleviating dysphoria, you know, there's all sorts of ways to define what is successful. You have to have in mind what the outcome is that you desire.
Q Let's say alleviating the dysphoria is the goal. What do you think is appropriate?
A Well, certainly, the individuals that are affected with gender dysphoria are very well-known to have a number of psychosocial morbidities. And with the goal of alleviating depression, I mentioned these before; depression, anxiety, eating disorders, increased rate of sexually transmitted diseases, homelessness, you know, all of the different components of that, the therapies that are available, and there is clear data available in the psychiatric, you know, community about how to address some of those issues. Some of them are not medical. Some of them are sociological. And, you

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know, as far as -- and, again, treatment implies, you know, that you have an outcome. Intervention means you do something. So, you know, what is the category of what can be done to alleviate the dysphoria? But there's a caveat to that; that you can have a short-term solution that has a long-term consequence that's adverse. So that if you are proposing to alleviate dysphoria, but you don't identify what the underlying factors are, you may alleviate the discomfort but not solve the underlying other factors that are leading to the psychosocial morbidity. I'm a pediatric endocrinologist. I specialize in hormones. The psychological we've already discussed as far as the psychological treatments that I -- and the problems that I encounter frequently in my practice, so the answer is that we don't have a clear answer. We have clear things that can be done to make the situation better. And I think that there's general agreement that one needs to approach the depression itself and all these other things, anxiety, all the other things going on. And I do believe that that key to success is respecting human dignity, recognizing that these individuals are suffering, and focusing the intervention that you're proposing

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with the shared goal to achieve that goal. And I think that the answer is not there. I think that we can do things while we're searching for the etiology. We can do things while we're searching for more effective therapies. And I think they fall within the mainstream of general practice of medicine. And it's in the realm more of psychiatry and psychology and it's not making any judgment on the individual. It's not making any definitive statement about, you know, what the desired outcome would be as far as desistance or persistence. It's more, you know, with the goal of alleviating that discomfort in a way that's truly helpful for that individual.

Q Let's unpack that a little because that was a lot. Do I understand that you don't believe that hormone therapy for adults is appropriate as an intervention for gender dysphoria?

A I state that the scientific evidence does not give us a clear answer one way or the other and the existing evidence leads one to question whether it is the right approach.

Q So, based on that, you do not consider that treatment through hormone therapy to be appropriate?

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A I believe it's a topic that needs to be investigated in the context of a scientific study.

Q But, until then, you do not consider it to be appropriate treatment?

A The whole basis as to why I'm not participating in the Transgender Clinic at Children's Hospital is based upon that conclusion.

Q Right. I understand that that -- that's about treatment of children, but is it the same view with respect to treatment of adults with gender dysphoria?

A The same concerns do apply to adults. The way the trials -- and with the exception of, perhaps, pubertal blockade, so I think there are shared concerns about the scientific evidence in adults as well.

Q So, you believe that until we have a clear answer, I think was the way you put it, about what treatments are effective, we can do psychological counseling, is that right?

A Again, you know, the issue of belief is a -- I'm looking at the science. Okay. So I am stating that there's not evidence here that tells us that the intervention that we're doing has a long-term benefit for these affected individuals.

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Q Hormone therapy?

A Well, yes, hormone therapy. And there is emerging data about risks associated with that and when one does a proper risk-benefit analysis, it is not strong enough to make -- I think that if it is the right way to go, if the science shows that, you know, once we have the scientific studies available, we'll have more information about that and be able to better judge the long-term adverse effects of this intervention.

Q In the -- you wrote a report in the Adams case as well, an expert declaration, I should say, correct?

A Yes.

Q And I'm happy to show it to you if we need to, but in that case, you said you favored dignity-affirming care that maintains, quote, biological reality.

A Yes.

Q Is that correct? Can you tell me what that means?

A We've already discussed that. Biological reality of maintaining what it means to be male and female and addressing that in accord with that.

Q So, would -- could cross-sex hormone therapy ever maintain biological reality? Could that ever be a treatment that maintains biological reality?

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A So it's a complicated question and I know you didn't intend it to be complicated, but the reason why it's complicated is that the intervention itself, you know, is a technical issue of achieving a cosmetic result. We know what we do when we give hormones, what it's going to do to change the outward appearance. We don't understand what the basis is, you know, if we understand that there's a biological component that can be significantly impacted or reversed or treated or whatever, you know, once -- it's a "what if," because we don't know what it is. If hormones address that fundamental etiology, then yes. But we don't have that information about what that is. So it's theoretically possible that hormones may have an answer. There's evidence right now that questions that as far as how well people are doing. And it may be that the -- and I think that in the whole area, to make blanket statements about this is off the table or this is on the table, I think is in error. What we need to do is really look at the evidence. And I think there's not enough evidence

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to say that this is established and it is absolutely necessary.

Q And, to be clear, there isn't evidence that establishes that any form of intervention for gender dysphoria is effective long term or short term, is that right?

A No, there's actually -- there is evidence, with limitations in the short run, that dysphoria is actually alleviated, but there's not in the long term that it provides a long-term solution. There's problems with all of the studies.

Q Just to be clear, and maybe I wasn't clear in my question, so there's evidence showing that hormone therapy is effective in the short term to alleviate dysphoria but not in the long term, is that correct?

A There is poor quality evidence that does show that, yes.

Q Okay. And then switching away from hormone therapy and just focusing on psychological counseling and treatment that does not involve hormone therapy, is there evidence demonstrating short-term or long-term effectiveness of that to alleviate gender dysphoria?

A There's poor quality short-term evidence

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that suggests that and we know this and we're drawing parallels to other known psychiatric conditions. We know that counseling does help people with depression. We do know that medications help people with depression. We do have an arsenal of medications that are available in the area of anxiety. We do have behavioral strategies that are available in dealing with compulsions and people that are involved in risky behaviors. We do have therapies that are available to -- that have been put forward to mitigate the risks of somebody engaging in something that's going to allow them to get a sexually transmitted disease. The list goes on and on of things that we have. Are they studied in a randomized controlled manner in a gender dysphoric population versus are we looking at data that's out there from other patient populations, other psychiatric issues that aren't receiving the attention that we're discussing now in gender dysphoria, where we equally don't have the answer, you know, as far as what the etiology is? You have to engage in psychological approaches to improve the life of these people without having that data.

Q And without focusing specifically on sort of depression, anxiety, and other conditions that

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may be comorbidities, right, with gender dysphoria, is there any evidence demonstrating the effectiveness of counseling to successfully alleviate the gender dysphoria itself, in adults?

A So, all of the data I've looked at has not been done in a manner that will actually demonstrate that whatever the intervention that they're putting forward was the result of that intervention. There's a very well-known phenomenon of the study effect. And if you bring somebody into a study and if you don't have it controlled and you don't have it randomized, that you see benefit just by the fact of being within the study itself. There are certainly parallels that we can acknowledge, you know, the question of social affirmation, for example, you know, that, again, I'm going to draw my experience as a pediatric endocrinologist during development. And there are many things that are uncomfortable about being an adolescent and going through puberty. And if you remove some of those things that are uncomfortable, you may actually alleviate the discomfort, but you haven't allowed the child to develop normally. I think you can apply that to adults as well. When people have desires that are creating discomfort and you give in

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to those desires, and we can draw parallels in other diseases as well, where if that is the desired goal, then they feel better, but you haven't addressed the underlying issue and in many other of those situations there, you have much worse medical problems or you haven't solved the problem, so you have other issues.

Q So, is it fair to say we don't have evidence that demonstrates the long-term effectiveness of hormone therapy to treat gender dysphoria and we don't have evidence to demonstrate the long-term effectiveness of counseling to alleviate gender dysphoria?

A I would say we have evidence that raises concern that we haven't fixed the problem.

Q But, do we have evidence demonstrating the long-term effectiveness of any treatment for gender dysphoria?

A We have evidence to the contrary.

Q So we don't have evidence demonstrating long-term effect?

A We have evidence to the contrary.

Q Evidence demonstrating lack of long-term effectiveness of any measure?

A Not only neutral effect but actually

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persistence of suicidal end points.
Q And, similarly, for counseling alone, we have evidence demonstrating that that does not provide a long-term effective solution?
A The only data that we have is looking at the protocol that is put forward that includes hormonal therapy and surgery and looking at what the long-term outcome is. It wasn't a prospective trial. It wasn't controlled. Cannot tell you what the therapy itself did. All I can say is it didn't fix the problem.
Q And we don't have those prospective controlled studies on treatment through counseling -- treatment of gender dysphoria through counseling?
A Not in the means that we need, no.
Q We don't know if that works either?
A We do know that there is benefit, but we don't have that long-term data, no, the trials have not been done.
Q Okay. Now, I know you've talked about three treatment approaches for at least children or pediatric populations of gender dysphoria, and tell me if I'm summarizing accurately; conversion or reparative therapy to encourage children to identify

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with their biological sex; neutral approach of neither encouraging nor discouraging transgender identification; and affirming approach to encourage children to embrace a transgender identity with social transition and hormone therapy. Did I accurately describe --
A Those are the three things that have been discussed in this area, correct.
Q And do you consider conversion or reparative therapy to encourage children to identify with their biological sex to be the best option of those three for children?
A I don't like the term "conversion therapy" because I think it's inaccurate as far as what it's conveying and it's loaded with things that really aren't true about what the goal is. But I would say that, from a very objective standpoint, that what -- what is being put forward with people that have persistence of gender dysphoria that engage in pubertal blockade followed by cross-sex hormones, with or without surgery, are dependent upon medical interventions for the rest of their life and there are known risks associated with that. For individuals that have desistence and realign their gender identity with their sex, that do not get

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placed on cross-sex hormones, they're not exposed to those medical risks. I think anybody objectively looking at that, if you compare those two scenarios, provided that the outcomes are the same, or if you look at it objectively, that not being dependent on the medical establishment, not being exposed to risks of the therapy would be a better outcome. That's just an objective statement.
Q Fair to say you don't like the term "conversion" or "reparative therapy," but you're talking about therapy that would help children identify with their biological sex? That would be your preferred course?
A I would say the goal and intent there would be to look at that as realignment of identity with biological sex would be, if that's the desired outcome, that's what people refer to as conversion therapy, yes.
Q That's your view of what the best treatment is for children with gender dysphoria?
A If you're comparing exposing somebody to medications that have risks to those that are not exposed, and that's the only difference between the two groups, it is beneficial not to have the risks.
Q Okay. So let's switch gears to adults.

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Do you favor, for adults, treatment aimed at encouraging adults with gender dysphoria to identify with their -- or to align their gender identity with their biological sex?
A So if I understand your question correctly, there is a clear difference between pediatric patients and adults as far as the incidence of realignment of their identity with their sex. It's much lower in adults. And so, defining the goal, the goal in both pediatric and adult patients is to prevent long-term morbidity, and you could say short-term morbidity, period. We don't want people committing suicide. We don't want people having all of the morbidity that occurs. That is the goal of treatment. How you achieve that is, I mean, the questions that are there are present both in the pediatric and the adult population. The population is different. I mentioned that being a multifactorial disorder. And if you have 80, 90 percent of the pre-pubertal children having, or pubertal children, have desistance, those that persist may very well have different etiologies. So if you recognize, like we do in other areas of medicine, if there's a multifactorial disorder that has not only differing etiologies but the

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contributing factors differ from one individual to another, both in magnitude and actuality, that your approach to treatment may differ based on that until we have information about what those factors are and how they respond, we're never going to get an answer.

Q So, for adults that have persisted and they're well past puberty and maintain a cross-gender identification, transgender identification, I'm still trying to understand what you consider appropriate interventions, if any, for that population of patients.

A I would say that we don't have the definitive answer of what the therapy is and that it's a topic of research, and any patient that is enrolled in any intervention should be under the auspices of an IRB with a carefully controlled trial that's going to help allow us to get that information.

Q What's an IRB?

A Institutional Review Board.

Q So, sitting here now, you couldn't say the appropriate treatment for adults with gender dysphoria includes counseling to alleviate the -- or to align the gender identity with the sex assigned

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at birth?

A I think most professionals say it includes that, but if that's the sole response or the extent that hormone therapy, you know, is a part of that therapy, the answer is not there.

Q I'm going to ask it different because I'm not sure I understood the answer there. Is it your view that there's just no known intervention or treatment that is effective to treat adults with gender dysphoria at this point?

A It gets back to how you define effective. But there is no data that suggests the intended goal of preventing suicide, long term, you know, the interventions that we have right now, solves that problem. If the trial had been done in a randomized, controlled manner, you could look at current interventions and say, What is the rate of suicide in the group that received that intervention versus those that didn't? That's what needs to be there to answer that question. That data is not there.

Q Is there data on quality of life of people who have had hormone therapy?

A There is.

Q What does that show?

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A That is, again, looking at whether you're looking at long term or short term. And the same deficiencies, the same studies that report compared to the background population, as far as quality of life, that they still suffer from many of these other morbidities. And to the extent that that's put forward that that's social stress versus the underlying difficulty that the person is experiencing has not been rigorously studied in science.

Q So, at this point, given the information that we have from research that's been done, your view is we don't have scientific validation of -- that treatment through hormone therapy or surgeries alleviates gender dysphoria in the long term, is that right?

A Yes.

Q Okay. That being said, is it your view that that's, therefore, an inappropriate treatment to offer adults with gender dysphoria?

A My opinion is that it's inappropriate to present it as a definitive answer when we don't have that answer and that if you're going to offer that intervention, it needs to be known that this is essentially experimental intervention.

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Q Okay. So, the intervention that -- is there any kind of intervention you think is appropriate to offer adults with gender dysphoria?

A I think it's very appropriate, that includes everything that we've talked about here, to study that in the scientific realm to see if it actually provides the benefit we're looking at.

Q But right now, before we have additional studies that are not currently available to us, do you think it's appropriate to offer patients with gender dysphoria, who are adults, any particular intervention or treatment?

A Not any particular intervention. I believe that would be -- they would be best served by approaching this, and, again, what goes on in a clinical trial versus what goes on in a doctor/patient relationship and a patient in the office are two different questions. The stipulations of the Belmont Report state very clearly there are many things that go on in a doctor/patient relationship where we do therapies that are not proven and the directive there is that when engaging in a situation with a patient in your office, that it is necessary to move beyond that to get that general information.

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Q So I'm still not understanding what intervention or treatment, if anything, you think is appropriate to offer an adult with gender dysphoria now before we have additional research available.

A I would say that in what I've looked at, because I'm a pediatric endocrinologist, I don't see strong enough evidence that supports the hormonal treatment. Again, I'm not a surgeon, but I don't see the evidence in the surgical realm as well and I do see benefit of psychological support. Now, whether that's combined together with those other two interventions, in an investigational role or not, is not the question that should be discussed at this point in time.

Q But, as far as treatment, putting aside investigation and research for treatment, is it your view that psychological support is appropriate to offer, but not hormone therapy and surgery?

A Again, getting back to the question of treatment, what is your goal? What is the practitioner's intent in engaging that patient that's in their office with the data that's out here? And, you know, there's -- there's enough concern about the long-term outcomes that I could not recommend hormone therapy knowing that these

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patients are going to have nearly a 20-fold increase of committing suicide, and the data that I presented in my report showing that, before and after treatment, it doesn't get any better as far as suicidal ideation. If that is the goal, then there's no -- actually, it would suggest to me that you need to move beyond that. If your goal is to make the patient feel better in the short run, the interventions themselves will accomplish that goal, but at what cost?

Q Okay. Do you believe there's evidence demonstrating that the kind of treatment I referred to earlier, to psychological counseling to try to help align someone's gender identity to match their biological sex, that there is evidence that that can be effective or is effective with adults with gender dysphoria?

A I am -- again, because I was -- so I would say that the literature that I am most familiar with is in the area of pediatric patients. And I think that there's even fewer studies that are done in adults. In fact, I'm not aware of any studies that actually do this in adults.

Q To look at counseling to align your gender identity with your sex assigned at birth?

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A That's correct.

Q You're not aware of any studies that have looked at that?

A No.

Q So whether or not that's an effective treatment is unknown at this point?

A Yes. And that's why -- that I'm -- when I have discussions with colleagues, you know, defining what the goal is. I think, in adults, it's reasonable to say the goal is not -- in kids, I think there's a reasonable goal to set that if this is a potential outcome in this particular patient, that's a good outcome and that that -- if there's anything we can do to support that.

Q And "that" being align your gender identity?

A Align the gender identity with the sex. Again, the literature that's out there, at least the data that's out there, with a much lower rate of realignment or desistance, because it's so low that we need to redefine what the goal is. And I think it would be, really, a stretch to put that forward as a primary goal. I think it would be very reasonable to ask the question, whatever we propose to do for this individual, can we prevent them from

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committing suicide? Can we prevent them from having morbidities associated with the condition itself or from any purported interventions?

Q Just to make sure, I think I understood what you were saying. So you think it would be a stretch to make the goal for an adult with gender dysphoria to realign their gender identity to match their biological sex?

A I think until we understand what the etiology is and have precise tools to distinguish differing etiologies, I think with the current state of knowledge, I wouldn't go there.

Q So you would make the goals more modest to alleviate the depression and other comorbidities, is that right?

A Again, I would say that the rationale that's put forward, to intervene with such strength, is related to suicide. That should be the No. 1 goal. And then once you've achieved that, and it's related to the other morbidities, the other psychological morbidities, that that should be the secondary goals that we should pursue.

Q Okay. So you're not out there recommending therapy for adults to try to realign their gender identity with their biological sex?

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if that intervention is going to be pursued, I would not consider that medically necessary, but a best attempt -- best attempt to do the best in the situation ideally in the setting of a research study.

Q Okay. So you don't believe that mastectomies for transgender men with gender dysphoria can help alleviate their dysphoria?

A I don't believe there's enough evidence to answer the question and, therefore, to make the statement that it's medically necessary is not supported by the evidence.

Q Okay. Now, part of the passage I read said there's -- let me just read it again -- limitations of the existing medical literature prevent definitive conclusions regarding long-term safety and efficacy. There's research on long-term safety of mastectomies, right?

A I would challenge that. As far as -- well, so, again, for example, the -- well, the short-term effects, I'm thinking more about. The long-term effects, the safety relates to -- again, it gets back to the bigger picture of what's being done. The reason why mastectomy's being done in this particular instance is to prevent suicide and

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there's not the evidence to suggest or to show that it actually does that. So safety, when you provide an attempted solution that doesn't provide the care, does that influence the trajectory? That's the safety issue. Certainly, you know, you have somebody that has cancer and you're removing that, if you're talking about, again, from an endocrinologist's standpoint, not from a surgeon's standpoint, you know, the risks in the short run of anesthesia, the risks of scarring, of infection, and the other things are all short term. The long-term safety issue is not from the procedure itself. It's to the point of what it does to the patient moving forward to address the issues that led to the desire to have that intervention. That's what I'm referring to in that statement.

Q So that having a mastectomy for a trans man could potentially cause safety problems because what?

A It's the analogy of putting a Band-Aid on a festering wound. If I say my solution is to put a Band-Aid over something that is infected and I pretend like that it solved the problem and it hasn't and it continues to eat away and lead to an amputation, that's not good medicine.

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Q Okay. We may have covered this before, but just in case I missed it, so is there available scientific and medical evidence supporting the long-term efficacy of any treatment for gender dysphoria in adults?

A I think the long-term data that's available suggests the current approach of hormonal treatment in surgery is that the risk of suicide and other morbidities persist after those treatments are done. It's more than just not showing it's effective. It's showing that it hasn't fixed the problem.

Q There's no evidence showing that any form of treatment fixes the problem for gender dysphoria in adults, is that right?

A I would agree with that, yes.

Q Let's look at Paragraph 42. Oh, wait. That's not right. There's no 42.

A There is a 42.

Q Something got cut off in my copy. Do you have it in yours? Let's look at yours. This is the one we're going to have to fix; this Exhibit 42. Okay. Let me find my spot. If you look about halfway down the sentence beginning, "In particular," right after 29. In particular, there

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is a concerning lack of randomized controlled trials comparing outcomes of hormone and surgical intervention with other treatment modalities, including psychological support. A couple questions about that. Do you only, as a pediatric endocrinologist, use treatments that have been through randomized controlled trials that compare the outcomes of the treatment with other treatment modalities?

A So, in any intervention that I'm putting forward for my patients, there's always a risk-benefit analysis.

Q So, you don't limit the treatments you provide to those treatments that have been through randomized controlled trials comparing the outcomes of the treatment with other treatment modalities?

A Most things that we do in pediatrics have -- we're applying data in other patient populations to try to make decisions about what's best for that particular intervention. And so, we have to do the best we have with that, but I would not make a statement that -- that there's a medical necessity in a situation where there's conflicting data or data suggesting that there's an adverse outcome to say that that is the approach that needs

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understanding, so --
Q Okay. And I just want to make sure I get clarity on some last questions on insurance. So, it's your view that insurers should never cover hormone therapy or surgery to treat gender dysphoria?
A What I say is that the assertion that there's a medical necessity, based on the scientific evidence, is not there. That's a different question.
Q Okay. So, in your view, there's no -- not evidence to support the conclusion that hormones or surgeries to treat gender dysphoria are medically necessary, ever?
A There's -- I'd say that the evidence right now is not sufficient to make the claim that it's medically necessary.
Q So you would have no problem with insurers covering it, but you -- your view is that there isn't evidence substantiating the medical necessity?
A It is my belief that because of the evidence that's out there that has cautions about potential adverse effects, if this is going to be offered to a patient, it should be done within a research study.

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Q So you believe it would actually be a bad thing if insurers covered it as a treatment outside of a study context?
MR. JOHNSON: Sorry. Object. Vague and indefinite.
A Because of the -- can you restate the question for me?
Q (By Ms. Cooper) Sure. Is it your view that if an insurer chose to cover hormone therapy or gender-affirming surgeries, as many now do, that that's -- that's a harmful thing and they ought not do that?
A Well, it depends on whence the study is and what the outcome is.
Q No, now.
A Right now, it may be a good intervention if it turns out it's an effective treatment. If may not be. It's unknown.
Q So, do you think insurers should not -- putting aside whether there's evidence to support them covering it, do you think they affirmatively should not cover hormone therapy or surgery to cover -- to treat gender dysphoria?
A I'm looking at the scientific evidence and the justification for putting this forward as

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medical necessity. And that's my competence to be able to state on that, based upon the evidence that's there, and I will state that the evidence there does not support that it's medically necessary.
Q And that's because there's no randomized clinical trials showing long-term effectiveness?
A In addition, there is evidence out there that shows that there's adverse effects, and we've already talked about this repeatedly, it's not just neutral, there's data out there that suggests, one, it doesn't fix the problem and, two, there are known medical risks of doing the intervention.
Q So it's not your view that insurers should limit coverage to treatments whose long-term safety and effectiveness has been demonstrated through randomized clinical trials?
A It is my opinion that if one is going to advocate for this being done as a medical necessity, there's no basis to make that claim.
Q But, again, but you're not taking the position that insurers should limit their coverage to any medical condition, any treatment, rather, that has been demonstrated to be safe and effective over the long term by randomized clinical trials?

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MR. JOHNSON: Object. Lack of foundation.
A The way you just asked that question gets me back to my previous answer. There's actually evidence that it may be not a good idea, that it creates risks and problems, so you keep asking me the question as a -- that it's a neutral effect. And I'm saying that there's reason, as a clinician, to look at that data and be concerned if it's not being done in the setting of a research study, to recommend that that be done.
Q I see. Let me clarify my question. Talking about conditions outside of gender dysphoria, I'm not talking about gender dysphoria now, is it your view that insurers should only cover treatments whose long-term safety and effectiveness is confirmed by randomized clinical trials?
MR. JOHNSON: Same objection.
A And I will state the same; if situations where there's existing evidence that calls into question the efficacy or the safety of a particular treatment, it would not be prudent to recommend that one proceed with that therapy until we get the necessary clinical evidence.
Q (By Ms. Cooper) But, without that evidence calling into question the safety or efficacy, the

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there and there are things that are contained within this document that would fall within the realm of the committee members' opinions based on this, which actually contradict the scientific evidence. And the example of that is the social affirmation component of this. In the 2009 guidelines, they argued against social affirmation because of the desistance rates and the caution that needed to be put forward there. In the revised guidelines, without any scientific studies to support the changing of that recommendation, they tempered that recommendation. That does not represent science. That represents opinion of the committee members.

Q Are there any professional groups in the field of medicine or mental health that agree with your opposition to gender-affirming treatment for gender dysphoria in adults?

A I'm only aware of one; The American College of Pediatricians. And I think there's a Ob-Gyn group that publicly supports the same recommendations.

Q What do you know about the American College of Pediatricians?

A Not very much. I do know that their recommendations are put to the entire membership --

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the entire membership and any recommendations they make out have that representation by the entire group, so --

Q And am I right that that's a group of pediatricians who broke off from the American Academy of Pediatrics because of disagreements with the American Academy of Pediatric support for adoption by gay couples?

A I'm not aware of the historical basis of that organization.

Q Okay. Are you aware that it's a group of christian pediatricians who have a -- bring a faith perspective to their views?

A You know, certainly the people that I know are members of that organization have certain viewpoints, but, again, that's -- again, I'm going beyond my knowledge of that organization.

Q Okay. So you don't know if they're an organization that bases their views on science or something else?

A No, they do base it on science and, in fact, I would say that they are upfront about the science that they look at. And they're much more upfront about that. I have looked at their website to be able to see what they're putting forward. And

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they're very much clear that they're basing their recommendations on science.

Q And not on ideology?

A I think that to the extent that that influences any recommendation, they're probably more objective, in my understanding, from what I know, and, again, it's very limited.

Q Do you think of them as a credible scientific organization?

A Scientific organization?

Q Medical organization.

A I think they certainly put forward information that is a benefit and, again, it's part of the entire process of being able to have ongoing dialogue. I think that there's utility in that, but I think there are multiple organizations in my profession and others that have value for various reasons.

Q Okay. Let's go back to your report. If you can look at Paragraph 28.

MR. JOHNSON: Is that 48 --

MS. COOPER: 28.

Q (By Ms. Cooper) -- and you refer to the claims of proponents of transgenderism. What is -- what do you mean by a proponent of transgenderism?

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A I'm specifically referring to people that are basing their opinions on ideology, not on scientific evidence. And I've encountered a number of people that have never read the scientific studies yet they have very strong views about what should or should not be done. And that's the ideology and it's -- as I've prefaced that section as an ideological discussion to be able to distinguish science from ideology.

Q So, who are some of these proponents of transgenderism you're referring to?

A Those are the people that are usually on the news and are putting forward statements and it's a wide collection of different people. They're the ones that are out there advocating for what they believe is the best thing to move forward in a very forward way.

Q So, are you referring to transgender activists? Is that what you mean?

A That would include those individuals, yes.

Q Are you including medical professionals of any type?

A Those that are approaching this based on ideology and not science could be included in that category.

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that was necessary for me to be able to understand a little bit more what was going on. And then the complaint, the expert declarations, the rebuttals to that, and I think everything else that I read I would have approached independent of participating in this case because of my ongoing desire to know what's going on in this field.

Q You mentioned people fire you off e-mails. Do you mean from advocacy groups? Who fires you off e-mails that you were talking about?

A I get these all the time in all different areas. We have -- in fact, my colleagues at Washington University will alert me to papers I have, e-mails that come out, Medscape, for example, comes out with all sorts of things that come across my desk.

Q Okay. And did you -- you've reviewed the materials published by the American College of Pediatrics on gender dysphoria, isn't that right?

A Yes. Yes.

MS. COOPER: Let's take a break for about five minutes. Something like that. And then I think we won't have too much more.

(Break Taken.)

Q (By Ms. Cooper) We can go back on. We've

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used the term "medical necessity" in various ways and I just want to get some clarity to make sure we're on the same page. I understood you to be saying that there may be conditions for which -- excuse me, let me say that again. There may be treatments where there's no randomized clinical trials demonstrating the safety and effectiveness over long term that you might still recommend for patients, but you wouldn't say it's medically necessary. Is that -- did I say that right?

A Yes.

Q Okay.

A And, again, the caveat there is that's different than things where there's evidence that suggest it might be harmful.

Q And is it your understanding that that understanding of the term "medical necessity," that something's not medically necessary if there isn't randomized controlled clinical trials demonstrating long-term safety and effectiveness. Is it your understanding that that is the definition insurance companies use in determining medical necessity?

A My understanding of insurance companies is they factor in a number of different considerations and one of them is whether it is efficacious and

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what is being done. They don't want to pay for things that are not going to have a benefit and I think that there are other things that factor in their consideration as well, including cost and logistics, allocation of scarce resources. There's all sorts of things that insurance companies use, but whether it is efficacious is certainly a consideration and it's a valid consideration.

Q And whether it's efficacious could be determined by data apart from randomized clinical trials over long term, right?

A It certainly is considered in short term and various end points that you have and even the strength of the data. You don't discount low-quality studies, but you don't use them as the benchmark as far as making that determination that we've solved the problem.

Q So, just to be clear, it's not your understanding that insurance companies would limit insurance coverage only to those treatments that have been demonstrated to have long-term safety and effectiveness through randomized controlled clinical trials?

MR. JOHNSON: Object. Lack of foundation.

A Again, the considerations, I think there

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are some things that remain a mystery to me as far as why insurance companies will or will not approve of various therapies, but, again, it ultimately comes down to a risk benefit analysis with the things that they're considering, not necessarily in line with what the practitioner is in that risk-benefit analysis.

Q Okay. So, is it your understanding the insurance companies will not cover treatment unless it's been definitively determined by the research community to be solved as efficacious?

MR. JOHNSON: Same objection.

A I don't recall ever saying that and I wouldn't say that. But I would say that it -- certainly the level of information that is available will influence the decision that's made.

Q (By Ms. Cooper) So it doesn't necessarily have to be research conducted by randomized clinical trials demonstrating long-term effectiveness?

A It will depend upon the cost, the number of patients that are being affected by this, by not only effectiveness but also side effects of treatment that will, actually, potentially incur cost to the insurance company that's going forward with this. All of that will play a role and more.

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the fringe, not recognizing that the society guidelines were put forward by a small group of individuals and many of the recommendations, especially WPATH, he was on the panel and the lack of respect for the information that was present in the scientific study. In reading it, it could be interpreted to represent a bias on his point -- on his part.

Q Thank you. And but the actual study you said he cited, did you have a chance to look at those?

A I've read through them. I don't have any -- I would love to go through each of those studies in detail and look at the actual science that's present in there and the conclusions that actually can be made from those studies. I don't know if we have time to do that all this evening, but I'd be happy to do so.

Q My only question is: Have you read them?

A Yes.

Q You also saw Lawrence Schecter's reports?

A I spent less with that report than I did with Dr. Brown. He wasn't directly rebutting my opinions in that matter.

Q Do you have any criticism of

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Dr. Schecter's report?

A I think, in a general sense, that some of the same errors that were made as far as being able to portray, you know, what I'm putting forward, I didn't see any -- anything in either of the declarations that directly addressed the data that I presented from an objective standpoint about scientific data. I've not, to this point in time, seen any data that refutes my opinion that the data is not there, to prove the efficacy that there is data there that suggests that there are potential harms that are present and that's there's a need for ongoing research. There was nothing in either of those reports that I think addressed that particular contention that I had in a way that needs to be done.

Q Okay. And just one last question. You know, we've got every major medical association in the country that has anything to say about gender dysphoria coming out in a position that is at odds with your view. What do you make of the fact that the entire organized medical professional associations all are taking one position and you're taking a different position?

MR. JOHNSON: Object to the gratuitous

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remarks of counsel. And it's argumentative.

Q (By Ms. Cooper) Go ahead.

A So, are you asking me to speculate about what the motivations -- rephrase the question, please.

Q I'm just wondering to what you attribute the fact that every major medical association in the country believes that hormone therapy and surgeries can be medically necessary to treat gender dysphoria in adults. And I know you disagree with them. I'm wondering, to what do you attribute them all lining up in the same way?

A So, if you're asking me to speculate on how the guidelines have been put forward, I think I've already addressed the fact that these are put forward by a small subset of the entire societies, many of these individuals that are putting these forward are the same individuals that are all talking to each other, they're all looking at putting forward, you know, policies within the narrow framework of what they've looked at. They've not had the opportunity -- they've not welcomed the input of the wider membership of the societies that are present and, certainly, because of that selective biased reading of the literature, most of

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them actually agree with the scientific deficiencies that are there. What differs is that the strength of which they make the recommendations and the lack of evidence, which is contrary to other areas of medicine, as we discussed previously, that their recommendations are made with data available, but usually it's a more cautious approach to that, so I would interpret as a speculation, not having been present in the meetings that were there, is that they're being driven by the -- a small group of individuals that are putting this forward that are finding themselves in the different societies as a whole and it does not necessarily reflect the entire views of the entire membership of these medical organizations, and I know that from my own experience.

Q From your own experiences in associations?

A That other people that aren't on the board that put together the recommendations have the same concerns that I have and have not been given the opportunity to be able to be present in those discussions.

Q And your suggestion that is the same group of people in the psychiatric group and the endocrinology group and the pediatrics group, it's

the same people you think are making these recommendations and writing them?

A To be clear, I'm making speculation on things. You're asking me to do this. And I'd like to generally stay with what I know and with what's scientifically verifiable. There are many things that I can speculate as to the reason why. The best answer to that question would be asking them.

Q Great. So you don't have any personal knowledge that they all have a bias of some sort?

A I have objective information by how they interpret the data when I look at the same data and draw a different conclusion, when we consider the same studies, you know, that that's objective. The discussions that went on behind closed doors, I'm -- I have not been privy to that.

MS. COOPER: Great. Thank you. We're done.

THE WITNESS: Thank you very much.

MR. JOHNSON: Under South Dakota procedure, you have the right to read and sign the deposition and I'd recommend you do so.

THE WITNESS: I would definitely like to do that.

MR. BLOCK: And you don't have any

questions? You don't have any redirect? I just want to make sure.

MR. JOHNSON: No, I understand the procedure.

(Ending time of the deposition: 4:57 p.m.)

STATE OF MISSOURI)
)SS
CITY OF ST. LOUIS)

I, Rebecca Brewer, Registered Professional Reporter, Certified Real-time Reporter, and Notary Public in and for the State of Missouri do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of the said witness was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken, and further that I am not relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

_____ RPR, MO-CCR,
Notary Public within and for the State of Missouri

My Commission expires April 7, 2021

Mr. Jerry Johnson
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In Re: BRUCE vs. STATE OF SOUTH DAKOTA.

Dear Mr. Johnson:
Please find enclosed your copy of the deposition of DR. PAUL HRUZ, M.D., Ph.D. taken on JULY 16, 2018 in the above referenced case. Also, enclosed is the original signature page and errata sheets.

Please have the witness read your copy of the transcript, indicate any changes and/or corrections desired on the errata sheets, and sign the signature page before a notary public.

Please return the errata sheets and notarized signature page to Alaris Litigation Services, 711 N. Eleventh Street, St. Louis, Missouri, 63101 for filing prior to trial date.

Thank you for your attention to this matter.
Sincerely,

Rebecca Brewer, RPR, CCR (MO), CRR

cc: Ms. Leslie Cooper